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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/877,786	06/11/2001	Marc Jay Levine	USGS-3666	9912

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EXAMINER	
LEE, PHILIP C	

ART UNIT	PAPER NUMBER
2152	

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/877,786	LEVINE, MARC JAY	
	Examiner	Art Unit	
	Philip C. Lee	2152	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-7,9,11-20 and 22-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-7,9,11-20 and 22-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 31, 2005 has been entered.

2. Claims 1-2, 4-7, 9, 11-20 and 22-28 are presented for examination. Claims 3, 8, 10 and 21 are canceled.

3. The text of those sections of Title 35, U.S. code not included in this office action can be found in a prior office action.

Claim Rejections – 35 USC 103

4. Claims 1-2, 6-7, 9, 11, 13-16, 19-20, 22 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle et al, U.S. Patent Application Publication 2003/0154261 (hereinafter Doyle) in view of Chen, U.S. Patent 5,748,194 (hereinafter Chen).

5. Doyle was cited in the last office action.

6. As per claims 1 and 28, Doyle taught the invention substantially as claimed for managing, visualizing, and analyzing geospatial data across a computer network, said system comprising:

a plurality of processing servers integrated with one another for providing at least one data set by distributed processing (page 4, paragraph 34; page 9, paragraph 97), said at least one data set comprising a plurality of data set values (i.e. pixel values) (page 6, paragraphs 66 and 68); and

a client computer connectable to said plurality of processing servers for transmitting a query request to said plurality of processing servers, for receiving and storing said at least one data set (it is inherent that the image data must be stored in memory in order to perform the process of updating of the view of the image.) from at least one of said plurality of processing servers, for rendering an image from said at least one data set (page 6, paragraphs 66 and 68), and for conducting geospatial queries between said data set values of said at least one data set (page 4, paragraph 34; page 6, paragraphs 66 and 67; Page 9, paragraph 97). Note that since the user (i.e., client computer) is able to rotate, scale and otherwise reposition the viewpoint with the image, it is inherent that user must conduct geospatial queries (i.e., manipulating the data received from the server) between the data set values.

7. Doyle did not specifically disclose detailing the data set values (i.e., pixel values) in different formats. Chen taught wherein the data set values (i.e., pixel values) in different formats (col. 6, lines 1-4).

8. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle and Chen because Chen's teaching of data set values in different formats would increase the compatibility of Doyle's system by allowing the server to compute frame data using different formatted pixel values.

9. As per claim 6, Doyle and Chen taught the invention substantially as claimed in claim 1 above. Doyle further taught that said at least one data set comprises a plurality of data sets and said image rendered from said plurality of data sets (page 6, paragraph 66).

10. As per claim 7, Doyle and Chen taught the invention substantially as claimed in claim 6 above. Doyle further taught that said plurality of datasets are stored on a respective one of said processing servers (page 5, paragraph 60).

11. As per claim 11, Doyle and Chen taught the invention substantially as claimed in claim 1 above. Doyle further taught that each said plurality of servers executes a respective server application, and the server applications executed by said plurality of servers being integrated with one another so as to provide said at least one data set (fig. 6, page 6, paragraph 68).

12. As per claim 13, Doyle and Chen taught the invention substantially as claimed in claim 1 above. Doyle further taught that said at least one data set comprises spatial data and attribute data (page 6, paragraphs 66 and 68; page 9, paragraph 92).

13. Claims 14-16, 22 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle in view of Official Notice.

14. As per claim 14, Doyle taught the invention substantially as claimed comprising:

transmitting a query request from a client computer to one of a plurality of processing servers integrated with one another (page 6, paragraphs 66 and 68);

using distributed processing to provide at least one data set comprising a plurality of data set values in formats, including at least raster, from at least one of the plurality of servers (page 6, paragraphs 66 and 68);

sending the at least one data set to the client computer in a format readable by said client computer (page 6, paragraphs 66 and 68); and

using the client computer to render an image from the at least one data set (page 6, paragraph 66).

15. Doyle did not specifically teach formats included vector and tabular. Official Notice is taken for the concept of formats included vector and tabular are well known and accepted in the art (e.g. vector and tabular representations in a diagram).

16. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include data in different format including vector and tabular because by doing so it

would increase the compatibility of Doyle's system by allowing the server to compute data in different format.

17. As per claim 15, Doyle in view of Official Notice taught the invention substantially as claimed as in claim 14 above. Doyle further taught wherein the query request comprises a request to conduct geospatial queries between said data set values (page 4, paragraph 34; page 6, paragraphs 66 and 67; Page 9, paragraph 97). Note that since the user (i.e., client computer) is able to rotate, scale and otherwise reposition the viewpoint with the image, it is inherent that user must conduct geospatial queries (i.e., manipulating the data received from the server) between the data set values.

18. As per claim 16, Doyle in view of Official Notice taught the invention substantially as claimed in claim 14 above. Doyle further taught that said at least one data set comprises a plurality of data sets and said image rendered from said plurality of data sets (page 6, paragraph 66).

19. As per claim 22, Doyle in view of Official Notice taught the invention substantially as claimed in claim 14 above. Doyle further taught comprising:

executing a respective server application on each of the plurality of servers (fig. 6, page 6, paragraph 68); and

wherein the server applications are integrated with one another for said providing the at least one data set (fig. 6, page 6, paragraph 68).

20. As per claim 24, Doyle in view of Official Notice taught the invention substantially as claimed as in claim 22 above. Doyle further taught a raster server for retrieving and sending referenced graphic (page 6, paragraph 66).

21. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle in view of Official Notice as applied to claims 14-16 and 22 above, and further in view of Gortler et al, U.S. Patent 6,466,207 (hereinafter Gortler).

22. As per claim 17, Doyle in view of Official Notice taught the invention substantially as claimed in claim 16 above. Doyle in view of Official Notice did not teach superimposed multiple layers of subimages. Gortler taught said rendering the image comprises superimposed multiple layers of subimages (col. 6, line 62-col. 7, line 2).

23. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle in view of Official Notice and Gortler because Gortler's teaching of comparing data set values with each other would increase the functionality of Doyle's system by providing a process for rendering real-time three-dimensional images (single layered depth image) on a display based on viewpoint manipulation of prestored depth images (col. 2, lines 30-33; col. 7, lines 10-13).

24. As per claim 18, Doyle in view of Official Notice and further in view of Gortler taught the invention substantially as claimed in claim 17 above. Doyle further taught that each of said subimages rendered from one of said plurality of data sets (page 6, paragraphs 66 and 68).

25. As per claim 19, Doyle in view of Official Notice taught the invention substantially as claimed in claim 14 above. Although Doyle taught comprising: storing the at least one data set by the client computer; and modifying the data set values of said at least one data set to generate new data. (page 6, paragraph 66; page 9, paragraphs 95 and 96), however, Doyle in view of Official Notice did not teach comparing at least two of the data set values. Gortler taught comparing at least two of the data set values (col. 6, line 62-col. 7, line 2).

26. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle in view of Official and Gortler because Gortler's teaching of comparing data set values with each other would increase the functionality of Doyle's system by providing a process for rendering real-time three-dimensional images (single layered depth image) on a display based on viewpoint manipulation of prestored depth images (col. 2, lines 30-33; col. 7, lines 10-13).

27. As per claim 20, Doyle in view of Official Notice and further in view of Gortler taught the invention substantially as claimed in claim 19 above. Gortler further taught that said rendering the image comprises adding the image from said new data (col. 6, line 62-col. 7, line 13).

28. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle in view of Official Notice and Gortler for the same reason set forth in claim 19 above.

29. Claims 23 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle in view of Official Notice as applied to claims 14-16 and 22 above, and further in view of Roy et al, U.S. Patent 6,337,693 (hereinafter Roy).

30. As per claim 23, Doyle in view of Official Notice taught the invention substantially as claimed in claim 22 above. Although Official Notice taught tabular data are well known in the art, however, Doyle did not specifically detailing database server. Roy comprises:

maintaining and storing spatial data in a relational database on a database server (162, fig. 1; col. 4, lines 30-32).

31. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle in view of Official Notice and Roy because Roy's teaching of different type of servers including a database server would increase the efficiency of Doyle's system by providing faster retrieval time by using a plurality of servers for rendering image data to a requesting client.

32. As per claim 25, Doyle in view of Official Notice taught the invention substantially as claimed in claim 22 above. Doyle in view of Official Notice did not specifically detailing geospatial metadata server. Roy taught comprises:

extracting data from the relational database using a geospatial metadata server, the geospatial metadata server accesses and provides queries to the database server (140, fig. 1; col. 5, lines 21-26; col. 11, lines 14-28).

33. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle in view of Official Notice and Roy because Roy's teaching of geospatial metadata server would increase the efficiency of Doyle's system by providing faster retrieval time by using a plurality of servers for rendering image data to a requesting client.

34. As per claim 26, Doyle in view of Official Notice taught the invention substantially as claimed in claim 22 above. Doyle in view of Official Notice did not teach different types of servers. Roy taught that providing at least one data set comprising a respective plurality of data set values by the plurality of servers comprises:

sending a spatial operation request by the client computer (col. 3, lines 16-24);

receiving a spatial operation request by a map query server (col. 3, lines 16-24; col. 5, lines 21-27); and

returning unique identifiers by the database server for all features in the spatial operation request (col. 3, lines 16-24).

35. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle in view of Official Notice and Roy because Roy's teaching of plurality of servers would increase the efficiency of Doyle's system by providing faster retrieval time by using a plurality of servers for rendering image data to a requesting client.

36. Doyle in view of Official and Roy did not specifically teach generating and transmitting the map query request for retrieving data from a database server. However, Roy taught a map query server retrieving the map data from the database server (col. 5, lines 21-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use query request for retrieving data as the design choice of their system.

37. As per claim 27, Doyle in view of Official Notice taught the invention substantially as claimed in claim 22 above. Doyle in view of Official Notice did not specifically detailing different types of servers. Roy taught that providing at least one data set comprising a respective plurality of data set values by the plurality of servers comprises:

maintaining and storing spatial data and tabular data in a relational database on a database server (162, fig. 1; col. 4, lines 30-32);

sending a spatial operation request by the client computer (col. 3, lines 16-24);

receiving a spatial operation request sent by a map query server (col. 3, lines 16-24; col. 5, lines 21-27); and

returning unique identifiers by the database server for all features in the spatial operation request (col. 3, lines 16-24).

38. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle in view of Official Notice and Roy because Roy's teaching of plurality of servers would increase the efficiency of Doyle's system by providing faster retrieval time by using a plurality of servers for rendering image data to a requesting client.

39. Doyle in view of Official Notice and Roy did not specifically teach generating and transmitting the map query request for retrieving data from a database server. However, Roy taught a map query server retrieving the map data from the database server (col. 5, lines 21-27). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use query request for retrieving data as the design choice of their system.

40. Claims 2, 4-5, 9 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Doyle, Chen and Roy et al, U.S. Patent 6,337,693 (hereinafter Roy) in view of Official Notice.

41. Roy was cited in the last office action.

42. As per claim 2, Doyle and Chen taught the invention substantially as claimed in claim 1 above. Doyle further taught wherein said client computer further derives new data from said at least one data set (Page 4, paragraph 34; page 6, paragraph 66). (i.e., since the client is able to

rotate, scale and otherwise reposition the viewpoint with respect to the image by updating the original image, it is inherent that the client must derives new image data with respect to the original image data (e.g. said at least one data set) wherein the data set value are selected from the group of raster data (page 6, paragraph 66).

43. Doyle and Chen did not teach comparing data set with each other. Gortler taught comparing data set values with each other (col. 6, line 62-col. 7, line 2).

44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle, Chen and Gortler because Gortler's teaching of comparing data set values with each other would increase the functionality of Doyle's and Chen's systems by providing a process for rendering real-time three-dimensional images (single layered depth image) on a display based on viewpoint manipulation of prestored depth images (col. 2, lines 30-33; col. 7, lines 10-13).

45. Doyle, Chen and Gortler did not teach data set values including vector and tabular. Official Notice is taken for the concept of vector and tabular data set values are well known and accepted in the art (e.g. vector and tabular representations in a diagram).

46. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include data set values including vector and tabular because by doing so it would increase the compatibility of their by allowing the server to compute data in different format.

47. As per claim 4, Doyle, Chen and Gortler in view of Official Notice taught the invention substantially as claimed in claim 2 above. Gortler further taught that said image comprises superimposed multiple layers of subimages and the new data compares attributes of at least two of the multiple layers (col. 6, line 62-col. 7, line 2).

48. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle, Chen and Gortler for the same reason set forth in claim 2 above.

49. As per claim 5, Doyle, Chen and Gortler in view of Official Notice taught the invention substantially as claimed in claim 4 above. Doyle further taught that each of said subimages rendered from one of said plurality of data sets (page 6, paragraphs 66 and 68).

50. As per claim 9, Doyle, Chen and Gortler in view of Official Notice taught the invention substantially as claimed in claim 4 above. Doyle further taught that said image is modified to include said new data (page 6, paragraph 66; page 9, paragraphs 95 and 96) (i.e., the current position of the image is updated to include the new position of the image).

51. As per claim 12, Doyle and Chen taught the invention substantially as claimed in claim 11 above. Although, Doyle taught a raster image server for retrieving and sending referenced

graphic features, however, Doyle and Chen did not specifically detailing different types of servers. Roy taught that said plurality of servers comprises:

a host server [e.g. web server] connectable to said client computer and at least one other server (fig. 1);

a database server for maintaining a relational database, said database storing spatial data (162, fig. 1; col. 4, lines 30-32);

a geospatial metadata server operatively connected to said database server for providing data mining of said database (140, fig. 1; col. 5, lines 21-26; col. 11, lines 14-28) (i.e., database is providing map data that are stored on said database); and

a map query server for receiving a spatial operation request from said client computer and for generating a map query request to said database server (col. 5, lines 21-27), thereby said database server returning unique identifiers for all features in said spatial operation request in a format readable by said client computer (col. 3, lines 16-24) (Note that it is inherent that the unique identifier for all features in said spatial operation request must be in a format readable by the client computer in order for the image to be display on the client).

52. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Doyle, Chen and Roy because Roy's teaching of plurality of servers would increase the efficiency of Doyle's and Chen's systems by providing faster retrieval time by using a plurality of servers for rendering image data to a requesting client.

53. Doyle, Chen and Roy did not specifically teach tabular data. Official Notice is taken for the concept of tabular data is well known and accepted in the art (e.g. tabular data representations in a diagram).

54. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include tabular data because by doing so it would increase the compatibility of Doyle's, Chen's and Roy's systems by allowing the server to compute data in different format.

55. Applicant's arguments with respect to claims 1-2, 4-7, 9, 11-20 and 22-28, filed 5/31/05, have been fully considered but are moot in view of the new grounds of rejection.

CONCLUSION

56. A shortened statutory period for reply to this Office action is set to expire THREE MONTHS from the mailing date of this action. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Philip C Lee whose telephone number is (571)272-3967. The examiner can normally be reached on 8 AM TO 5:30 PM Monday to Thursday and every other Friday. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bunjob Jaroenchonwanit can be reached on (571) 272-3913. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained

from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

P.L.

BUNJOB JAROENCHONWANIT
SUPERVISORY PATENT EXAMINER